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Decrease of American Sugar Crops.

In Louisiana, the yield of sugar has been decreasing for some years past. A planter gives statistics in the *New Orleans Crescent* which prove this. The sugar cane is propagated by cuttings, the same as the potato. It has been discovered by experience that no annual plant can be propagated by cuttings from year to year in the same locality and in the same kind of soil. The cultivation of the potato affords the most complete illustration of this principle, hence scientific farmers endeavor to obtain seed raised at some distance from where they reside, and on soil somewhat different from that in which they intend to plant it. Those who cultivate the sugar cane, in Louisiania and other places, should take measures early to obtain new cuttings and seed cane for their next crops from the West India Islands, in order to improve their yield of sugar.

Trial of a Steam Plow.

At the late meeting of the Royal Agricultural Society, England, when the trial of reapers was held, as noticed in our last number, a Steam Plow constructed by Mr. Fowler was also tested. It plowed one acre and sixteen poles in an hour with an 8-horse power steam engine.

Memento Mori.

James Bremner, Engineer, who managed to remove the steamer *Great Britain* after she was wrecked in Dundram Bay, and after many engineers of a far higher reputation had tried to do so, and failed, died last month at his native place, Wick, in North Britain.

Beet Root Coffee.

A very good coffee can be made of beet root in the following manner :—Cut dry beet root into very small pieces, then gradually heat it in a close pan over the fire for about fifteen minutes. Now introduce a little sweet fresh butter and bring it up to the roasting heat. The butter prevents the evaporation of the sweetness and aroma of the beet root, and when fully roasted it is taken out, ground, and used like coffee. A beverage made of it is cheap, and, no doubt, equally as good for the human system as coffee or chicory.

Artificial Light for Taking Photographs.

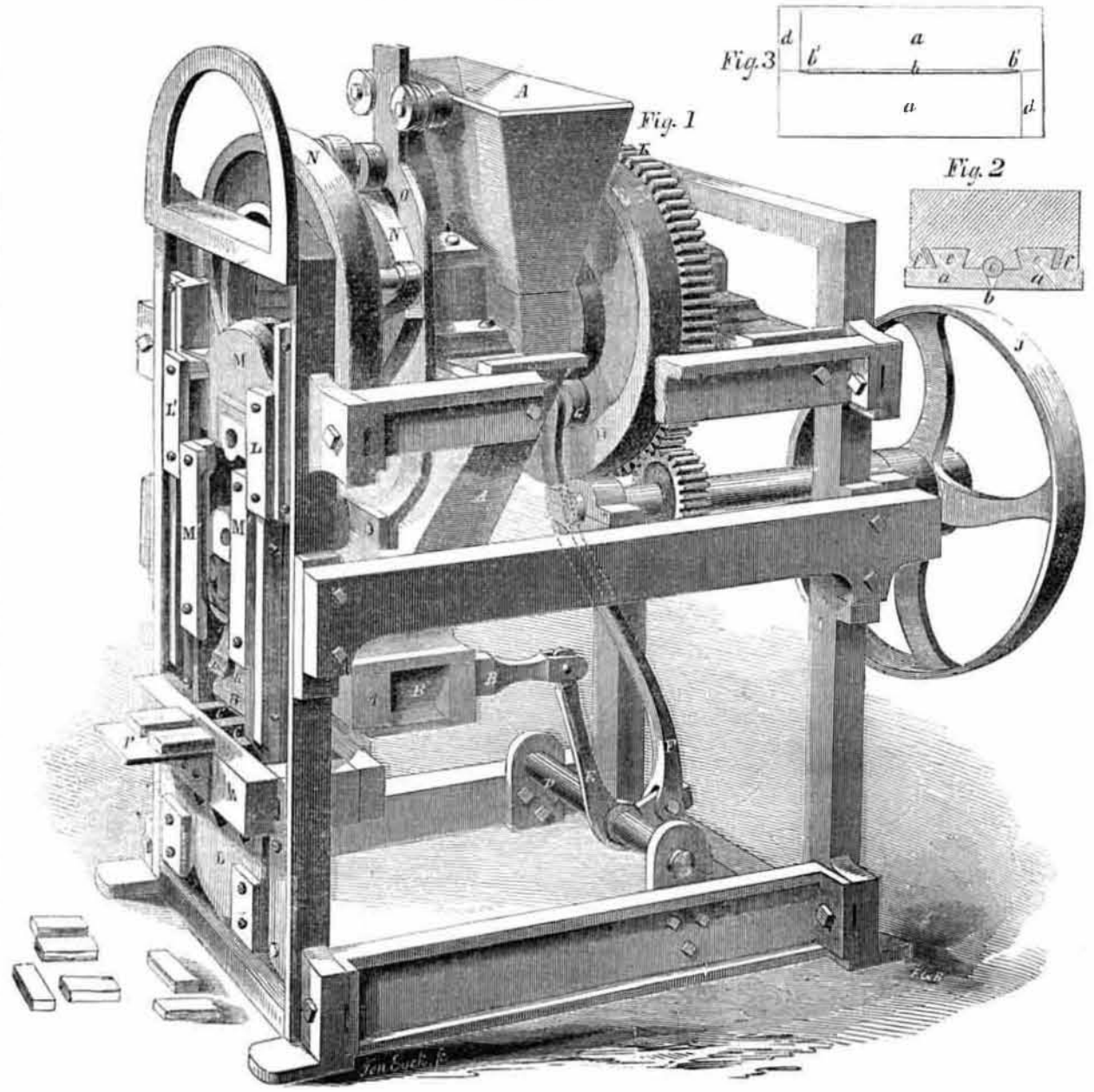
A very brilliant light has been produced by directing a stream of oxygen gas into the flame of coal gas which had been previously passed through cotton and naph a in order to surcharge it with carbon. Wi this light, using a reflector, a photograph o an engraving was taken by the camera in very short period.

New Brick Press.

Our engraving shows a new invention for pressing bricks out of dry clay, for which letters patent were granted to Mr. Stephen Ustick, of Philadelphia, Pa., July 10, 1855.

The clay, after having been finely pulverized is placed in the hopper, A, whence it descends into the sliding mold boxes, B. These boxes move back and forth, and serve to carry the clay forward to the molds, C, into which it falls, and is then pressed. The vibratory movement of the mold boxes, B, is effected by means of rock shaft, D, and rods, E F. The latter has a friction roller, G, upon its upper end, which follows the configurations of cam wheel, H. The latter is attached to gear wheel, I. The actuating power which drives the machine is applied at J.

IMPROVED BRICK MACHINE.



The necessary pressure is effected by means of four pistons, two of which rise through the bottom of mold, C, and two descend through the top. The upper pistons, K, only are shown The lower pistons are attached to a sliding frame, L L′, and the upper pistons to a sliding frame, M M′, both of which are caused torise and fall at the right moment by means of a double cam, N N′ O. This double cam is operated by the shaft which carries I. The movement of the cam is such that the faces of the two pairs of pistons are made to move towards each other, when within the molds, C, the lower pistons rising, and the upper pistons falling, the clay being pressed, with tremendous force, between them. After the pressure has taken place, the pistons rise until the bottoms of the bricks are brought up even with the table, P. The box, B, now comes forward, and its front end pushes the bricks forward on to table, P. At the same time the lower pistons descend, and the clay falls into the molds, the upper pistons, K, remaining suspended and stationary until the box, B, is withdrawn, when they descend and press, as before described.

Among the novel features connected with this improvement, is the method of allowing the air to escape from the molds, during the operation of compression; also the mode of expanding the piston so as to compensate for its wear. These features are shown in the sectional figures, 2 and 3.

The pressing face of the piston is formed of rectangular longitudinal plates, *a*, having transverse plates, *d*, of the same thickness, their ends arranged in such a manner as to enable the outer edges of *d*, to be brought at right angles against the side edges of *a*, the four plates thus put together forming a surface corresponding with the form of molds, C, and exactly fitting the same. The longitudinal plates, *a*, are separated a short distance from each other by thin plates or shoulders, *b′*, so inserted as to have a slit, *b*, between them of sufficient capacity to allow the escape of the condensed air, at the upper and lower parts of the brick, during the operation of pressing, but not of sufficient width to allow the passage of any material part of the clay. These spaces, *b*, between the plates, extend nearly the whole length, and are increased in width as they extend to the opppsite surface of the plates until they open into channels, *c*, which afford a free passage for the escape of the air at the ends of the pistons. The apertures may be cleaned by the insertion of wires or other devices, in case the clay should enter them.

The plates, *a*, are secured firmly to the body of the piston, by means of dovetailed projections or tongues, *e*, attached to plates *a*, said tongues, *e*, being inserted in corresponding mortises, which are larger than the tongues and made slightly tapering on one of their sides so as to admit wedges, *f*.

In case of wear, strips of metal or thin plates are inserted between the ends of the longitudinal plates *a*, and the transverse plates *d*, and the beveled or inclined edges, *f*, and again inserting thinner wedges to secure them together. By thus enlarging the area of the pressing surface of the piston, it is compensated for the wear of its edges, and adjusted to fit the molds at all times.

The working parts of this machine are all of the strongest character, and the arrangement is such that they cannot easily get out of order. Both ends of the machine may, if desired, have a set of molds attached, and, thus provided, the apparatus will turn out 20 000 bricks per diem, all pressed in the very best manner. The superiority of pressed bricks is well known. There is a saving of time in their manufacture, so far as regards preparation for the kiln, as they do not require to be dried so long as the common bricks. But for want of some rapid means of effecting the pressure and other obstacles, the expense of manufacturing is considerable. It is believed that in the improvement here illustrated, all difficulties have been removed. The inventor has had machines in operation for some time, with such success, as to justify him in believing that pressed bricks can be produced at a cost but slightly, if at all exceeding the price of common bricks. For further information address the patentee as above.